An Excerpt from the Nebraska GIS Strategic Plan Update, "Building a Spatial Data Infrastructure for Nebraska - December 2001"

DATA SHARING AND DISTRIBUTION. *Develop structures, standards, and processes that facilitate easy access to, integration, and usability of publicly available geospatial data.*

Why it is a Priority. A key component of any coordinated GIS development strategy must be the development and maintenance of mechanisms to facilitate the sharing of widely needed geospatial data. In the aftermath of the September 11th terrorist attack, the importance of reliable, efficient mechanisms for geospatial data sharing have become very evident. In times of an emergency, responders need quick access to the most accurate and current data available, and in data formats that can be quickly and easily integrated.

There are several essential elements to such a data sharing strategy. These include the easy ability to discover the existence of data and how it may be accessed. Most GIS experts would suggest that 70 to 80% of GIS implementation costs are commonly related to geospatial data development or acquisition. One of the surest ways to reduce the level of investment required for geospatial data development is to locate existing geospatial datasets, developed by someone else, that will meet some or all of your data needs. Geospatial data clearinghouses are a key component of the evolving spatial data infrastructure. Data clearinghouses are intended to provide a systematic approach for cataloging and locating available geospatial data for a particular area or region.

The documentation of the data to facilitate its proper use is another essential element of facilitating data sharing. If someone gets a geospatial dataset from someone else it is difficult to determine the appropriate use of that data if it is not documented with metadata (data about the data). Likewise, when there is a substantial public investment in the development of a database, the parallel development of metadata is important to preserve the public investment in that data. Without adequate metadata documentation, when the key staff members, who originally developed a given database, leave the organization, it is sometimes difficult to justify continuing to use that database. Without adequate documentation to explain how database figures or coding were derived it is difficult to defend policy or regulatory decisions based on that data. Standardized metadata also provides the basis for potential users to find available geospatial data through geospatial database search tools that have been developed around metadata standards.

The 2000 GIS Strategic Plan outlined the following as potential foci or projects under this Data Sharing and Distribution Initiative:

- Metadata Development. Initiate an on-going, active program to encourage and assist public agencies to document their geospatial databases with standardized metadata. Metadata program would include policy formation, outreach, periodic workshops, and technical assistance in creating metadata.

- Geospatial Data Clearinghouse. Integrate and build upon existing agency geospatial data Internet listings and clearinghouses to develop a high-profile clearinghouse for locating and accessing Nebraska-related geospatial data.

- Geospatial Data Sharing Cooperative. Promote and facilitate geospatial data sharing among public agencies through development of a Nebraska Geospatial Data Sharing Cooperative based on a common data sharing agreement.

Current Status. The Nebraska GIS Steering Committee has long recognized that facilitating data sharing and distribution must be one of its priority goals. Nebraska currently has two geospatial data clearinghouses, neither of which are comprehensive in nature. One is maintained by NDNR and is used to catalog geospatial data maintained by the NDNR Databank. The other, the Nebraska Geospatial Clearinghouse, is hosted by Nebraska Online on behalf of the Nebraska GIS Steering Committee. While this clearinghouse does provide a catalog of several key statewide geospatial databases, there are numerous other databases currently available, but have not been documented nor cataloged. The 2000 Strategic Plan noted that the Steering Committee does not currently have the resources that are needed to maintain a comprehensive geospatial clearinghouse for Nebraska.

The importance of this data sharing goal has recently received increased focus as a result of a couple of national initiatives. In the aftermath of the September 11th terrorist attack, the Steering Committee's Coordinator and member agencies worked closely with the Nebraska Emergency Management Agency to identify and locate the best available geospatial database for emergency and threat assessment planning.

In addition to the Homeland Security initiatives, there was also an earlier national initiative originating from a joint effort by the Federal Geographic Data Committee (FGDC) and the US Office of Management and the Budget (OMB). This initiative, known as Implementation-Teams (I-Teams), focused on a combined federal, state, local and private effort to identify widely needed geospatial datasets, assess their current status and availability, and to develop cooperative plans for their development, maintenance and distribution. While the I-Team concept was initiated at the federal level, all parties involved recognized the key role that state coordinating bodies such as the Nebraska GIS Steering Committee must play for it to be successful. Additional information on the Nebraska I-Team activities is provided under the Strengthen Coordination Capacity Initiative that immediately follows.

One of the fastest growing areas of GIS technology development relates to the use of the Internet as a means to access, display and analyze geospatial data remotely. At its May 2001 meeting the Nebraska GIS Steering Committee authorized the creation of an Advisory Committee on Interactive Internet Mapping *(see Appendix*). This Advisory Committee has developed several recommendations designed to facilitate data sharing using interactive Internet map servers. Additional information regarding this effort was provided under the earlier discussion of the Technical Assistance Initiative. This Internet Mapping Advisory Committee also recommended the establishment of a "*Nebraska spatial data access and support center (GIS portal)¼ to facilitate efficient access to and sharing of Nebraska-related geospatial data¼ ".*

Partially in response to this recommendation, the Steering Committee authorized the formation of a new Advisory Committee on Facilitating Geospatial Data Sharing at its November 2001 meeting *(see Appendix*). This new Advisory Committee was also a response to the earlier recommendations included the 2000 Strategic Plan, which called for exploring the possibility of establishing a GIS Service Bureau and for enhancing the existing Nebraska Geospatial Data Clearinghouse. This new Advisory Committee is charged with making "*recommendations related to the structures, standards, and processes that should be developed to facilitate easy access to, integration, and usability of publicly available Nebraska-related geospatial data,¼ with a particular focus on the related policy and funding issues."*

Where We Are Going. As more and more public and private entities adopt GIS technology, the importance and complexity of facilitating geospatial data sharing is growing rapidly. National initiatives such as the Homeland Security and I-Teams have added to the challenge by

adding the necessity of thoroughly integrating federal agencies and their needs into the mix. Everyone involved realizes the tremendous savings that can be achieved through joint data development and data sharing. However, it will require resources to develop and maintain the means to document, catalog, and distribute, on an on-going basis, a wide variety of geospatial data coming from a variety of state, local, federal agencies and private entities.

Currently there is no agency within Nebraska state government which is charged with filling these general geospatial data sharing needs. If the current trends are any indicators of future needs, the needs in the area of geospatial data sharing are likely to continue to grow at a fairly rapid pace. The GIS Steering Committee has charged its newly authorized Advisory Committee on Facilitating Geospatial Data Sharing with exploring this range of issues and making recommendations for how we might best develop and maintain this key piece of our data infrastructure.